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News and notes should be sent to Dana Barbour, News Editor, American Statistical Association, 1757 K Street, N.W., Washington 6, D. C.

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Anyone wishing to change his mailing address should allow eight weeks notice. A copy of the address taken from an issue of the periodical should accompany the change-of-address request.

Results of ASA Election

The following officers have been elected as a result of the vote of the membership last fall:

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R. BOYD LADD, San Antonio, Texas (1957)

District No. 10
HUGH H. BROWN, Los Angeles, Calif. (1957-58)

For the composition of these districts see the article, "New ASA Districts," elsewhere in this issue.

The complete list of officers, including continuing officers as well as those newly-elected, will be found elsewhere on this page.

NEWS

Election of Section Officers—1957 Local Arrangements—NSF Grants—Meetings—Seminars—Job Openings

Election of Section Officers

The following officers were elected by the *Biometric Section* by mail ballot:

Chairman—MILTON E. TERRY, Bell Telephone Laboratories

Chairman-Elect—HENRY TUCKER, University of Arizona

Secretary—CLYDE KRAMER, Virginia Polytechnic Institute

Committee—RALPH BRADLEY, Virginia Polytechnic Institute; GLENN BURROWS, Knolls Atomic Power Laboratory, General Electric Co.; IRWIN BROSS, Cornell University; ED KING, Eli Lilly & Co.; B. G. GREENBERG, University of North Carolina; FRED PHILLIPS

Milton Terry and Henry Tucker have been named Council members from the Biometric Section.

The *Business and Economic Statistics Section* elected the following officers in the mail balloting last fall:

Chairman-Elect—ROY L. REIERSON, Bankers Trust Co.

Program Chairman-Elect—GEORGE GARVY, Federal Reserve Bank of N. Y.

Regional Activities Chairman—ROBERT E. JOHNSON, Western Electric Co.

Publications Chairman—PROF. E. T. WEILER, Purdue University

Secretary-Treasury—GEORGE W. CLOOS, Federal Reserve Bank of Chicago

The Chairman for 1957 is Geoffrey H. Moore, who was Chairman-Elect last year. The Program Chairman for 1957 is Louis Paradiso. Roy L. Reierson and John W. Lehman have been designated members of the Council for this year.

Two new officers have been elected by the *Section on Physical and Engineering Sciences*. They are:

Chairman-Elect—IRVING BURR, Purdue University

Secretary-Treasurer—JAMES L. DOLBY, General Electric Co.

Continuing officers of this section are W. J. Youden, Chairman, and the following members of the Executive Committee—Robert Bechhofer, Carl A. Bennett, Irving Burr, William R. Pabst and Harold Weaver. Irving Burr and James L. Dolby have been named to the ASA Council.

The *Social Statistics Section* has elected the following new officers:

Chairman-Elect—DUDLEY KIRK, Population Council, Inc.

Vice-Chairman—CHESTER RAPKIN, University of Pennsylvania

A. J. Jaffe and Walt R. Simmons continue as Chairman and Secretary, respectively. Dudley Kirk has been designated as a member of the Council.

1957 ASA Annual Meeting

The 1957 Annual Meeting of the American Statistical Association will be held at the Ambassador Hotel in Atlantic City, New Jersey, from September 10-13 in conjunction with the Institute of Mathematical Statistics and the Biometric Society (ENAR). The Local Arrangements Committee for these meetings follows:

Hyman Menduke—*Co-Chairman*
The Jefferson Medical College, 1025 Walnut Street—WA 3-1100—Ext. 478

Stanley Schor—*Co-Chairman*
University of Pennsylvania, 37th & Locust Streets—EV 6-0100—Ext. 8228

Alan S. Cooper—*Secretary*
Gray & Rogers, 12 S. 12th Street—WA 2-4808

J. Hunter McDowell—*Treasurer*
Sun Oil Company, 1608 Walnut Street—KI 6-1600—Ext. 508

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University of Pennsylvania, 37th & Locust Streets—EV 6-0100—Ext. 8225

William F. Elkin—*Chairman Registration Com.*
Fife-Hamill Memorial Health Center, 7th & Delancey Streets—LO 3-6329

Morris Hamburg—*Chairman Publicity Com.*
University of Pennsylvania, 37th & Locust Streets—EV 6-0100—Ext. 8220

Haym Jaffe—*Chairman Fee Events Com.*
Drexel Institute of Technology, 32nd & Chestnut Streets—EV 2-6200

Paul W. Kayser—*Chairman Printed Program Com.*
Farm Journal, Inc., 230 W. Washington Square—LO 3-5820

Warren H. Lutz—*Chairman Employment Register Com.*
Bureau of Employment Security, Penna. Dept. of Labor & Industry, 2048 Arch Street—LO 7-3131

David C. Melnicoff—*Chairman Transportation Com.*
Pennsylvania Railroad Co., Suburban Station Building—EV 2-1000

Luis Nanni—*Chairman Information Com.*
Rutgers University, New Brunswick, New Jersey

Benjamin J. Tepping—*Chairman Meeting Room Arrangements*

National Analysts, Inc., 1015 Chestnut Street—MA 7-8109

Paul A. Vatter—*Chairman Social & Tours Com.*

University of Pennsylvania, 36th & Woodland Avenue—EV 6-0100—Ext. 515

Any questions concerning the meetings should be addressed to the appropriate chairmen.

Federal Statistics Users' Conference

A Federal Statistics Users' Conference was organized at meetings in Washington, D. C. on November 15 and 28. The Conference is a nonprofit membership service corporation representing business, labor, agricultural and research organizations with a common interest in the statistical program of the Federal Government. Among its contemplated functions are: The study of the statistical requirements of its members in the area of Federal statistics; the furnishing of information and analyses of such requirements to the Executive agencies and the Congress; the furnishing of status reports about Federal statistics programs to its members and to the public; the cooperation, as the need arises, with the leading specialized professional societies in the field concerning existing and proposed Federal statistics programs; the reporting to members on any activities meriting their attention and study in the field of Federal statistics; and the holding of periodic discussion and forum groups on such activities and subjects.

The Conference will be governed by a Board of Trustees representing constituent groups from agriculture, business, labor and the professions. Trustees representing business and labor have already been elected; those representing agricultural and research organizations will be chosen at a later date. The following officers were elected at the Nov. 28 meeting:

Chairman—RALPH WATKINS, Dun & Bradstreet

Vice-Chairman—PETER HENLE, A.F.L.-C.I.O.

Treasurer—RODNEY W. MARKLEY, JR., Ford Motor Company

Secretary—GERHARD COLM, National Planning Association

It is expected that a small professional staff will be engaged.

Requests for further information should be addressed to: Federal Statistics Users' Conference, 1420 New York Ave., Washington 5, D. C.

Business and Economic Statistics Section Committees

Two new committees of the ASA Business and Economic Statistics Section have been formed—a Publication Policy Committee and a Committee on Fellows. The Publication Policy Committee was appointed as a result of a resolution adopted at the 1956 Section meeting that a committee be formed to establish a publication policy for the Section and to recommend action to implement that policy to the Section officers. John W. Lehman has been named Chairman, the other members being Malcolm B. Catlin, Robert Ferber, Frank R. Garfield, Frank Hanna, James Knowles, Kenneth E. Miller and William H. Shaw.

The Committee on Fellows was created in pursuance of another resolution adopted at the Section meeting that a committee be appointed to establish criteria for the evaluation of the qualifications of Business and Economic Statistics Section members for recognition as Fellows of the ASA. Martin Gainsbrugh is chairman of this committee. Other members are John Boatwright, Ross Eckler, Grover Ensley, and Raymond Goldsmith.

Publication of Proceedings of the Business & Economic Statistics Section

The Proceedings of the Business and Economic Statistics Section for 1955 and 1956 are now available for distribution. The price to ASA members (except those who had ordered prior to publication) is $3.25; to non-members, $3.75. A tie-in arrangement is being offered to permit purchase of the remaining copies of the 1954 Proceedings for $1.00 instead of the regular price of $2.00.

The material presented in the Proceedings is designed to help deal with problems confronted by business economists and statisticians in their daily activities, as well as to be of interest to the academician. Among the topics covered are the stability of the economy—criteria for private debt, the role of supplementary unemployment benefits, cost and price, productivity cycles, stability vs. instability; long-term growth—financial implications, measuring growth potentials, projections critically appraised; progress in business statistics—impact of electronic computing, flow of funds, labor turnover, consumer price indexes, an integrated Federal program; and forecasts and forecasting—the business outlook, demands for durable goods, forecasting in industry, and the stock market.

Publication of the Proceedings was under the direction of a Section Editorial and Management Committee, with Henry W. Steinhaus serving as editor of the 1956 papers and Walter F. Ryan as editor of the 1955 papers. They were assisted by Ralph Burgess, Martin Gainsbrugh, George Garvy, George Cline Smith and Helen Slade.

Orders for the Proceedings should be addressed to the American Statistical Association, Beacon Building, 1757 K St., N. W., Washington 6, D. C.

National Science Foundation Grants of Interest to Statisticians

The National Science Foundation, established by Act of Congress in 1950 as an independent governmental agency, has broadened its program over the past few years to include areas of special interest to statisticians. The Foundation's program activities include grants in support of basic research, graduate fellowships, studies of the status of science, and partial support of travel to international congresses.

The basic research grants are usually made to academic and research organizations for support of the research of a principal investigator and his associates. The following research grants were made in 1955 and 1956 as part of the Foundation's Socio-Physical Sciences Program, which includes support of basic research in the areas of convergence of the social sciences with the mathematical, physical, and engineering sciences:

J. Blau Antioch College	Balanced Tables and Functions in Mathematical Economics	1 yr.	$10,000
R. D. Luce Columbia University	Mathematics of Imperfect Discrimination	2 yrs.	12,900
G. Moore and J. Shiskin National Bureau of Economic Research	Application of Electronic Computers to the Analysis of Economic Statistics	2 yrs.	27,200
F. Mosteller Harvard University	Experimental and Mathematical Studies of Choice Behavior	2 yrs.	17,500
T. Schultz University of Chicago	An Econometric Model of the Development and Acceptance of New Technology	2 yrs.	13,000

In addition, during the same two year period, the following grants were made as part of the Mathematical Sciences Program:

A. A. Albert University of Chicago	Survey of Research Potential in the Mathematical Sciences	2 yrs.	$60,000
D. Blackwell Institute of Mathematical Statistics	Statistical Inferences in Stochastic Processes	6 wks.	7,000
J. G. Kemeny Dartmouth College	Mathematical Methods in the Behavioral Sciences	2 yrs.	14,000
E. Lukacs Catholic University	Mathematical Statistics	2 yrs.	5,000
J. Neyman University of California (Berkeley)	The Distribution of Galaxies	2 yrs.	21,800
J. Neyman University of California (Berkeley)	Third Berkeley Symposium of Mathematical Statistics and Probability	3 wks.	10,000
M. C. K. Tweedie Virginia Polytechnic Institute	Statistical Estimation Theory	2 yrs.	11,700

A grant has also been made to Dr. Philip M. Hauser of the University of Chicago for a study of the status of and prospects for research in demography.

The Foundation's graduate fellowship program currently includes "statistics and statistical design" as an interdisciplinary field and "mathematical economics", "demography", and "information and communication theory" as fields of convergence of the natural sciences with the social sciences. Both predoctoral and postdoctoral fellowships have been awarded in these fields.

Travel grants have been made for attendance at the following international meetings: International Seminar of Biometric Society, Campinas, Brazil, July, 1955; 29th Meeting of International Statistical Institute, Rio de Janeiro, Brazil, July, 1955; International Meeting of the Econometric Society, Aix-en-Provence, France, August, 1956.

As announced in the last issue of The *American Statistician*, the Foundation is currently receiving applications for partial support of travel to the 1957 Stockholm meetings of the International Statistical Institute and the International Union for the Scientific Study of Population. The deadline for receipt of such applications is March 1, 1957.

Dr. Leon W. Cohen is Program Director for Mathematics and Dr. Harry Alpert is Program Director for Socio-Physical Sciences.

Information regarding National Science Foundation programs may be obtained by writing to National Science Foundation, Washington 25, D. C.

Transportation Research Symposium

The Management Sciences Research Group of the Department of Industrial Management and Transportation, Purdue University, will conduct a transportation research symposium on February 27-28 at Purdue University, Lafayette, Indiana. The symposium is being sponsored by the Institute of Management Sciences, the Operations Research Society of America, and the American Institute of Industrial Engineers, Inc. It will be under the direction of Professor A. Charnes, Director of Research of the Department of Industrial Management and Transportation.

The symposium has as its purpose to present the most recent results of management science research in its application to all phases of the transportation industry. It is intended to emphasize and balance in presentation both the point of view of practical operations and the point of view of method or "management science" innovation. It will attempt to stimulate the transfer of ideas developed in one type of transport operation to others. Finally, the symposium will strive to inaugurate a consortium of fellowship among leaders in transport management and in management science research.

Further information about the symposium may be obtained from Professor Charnes.

Southern Regional Graduate Summer Sessions in Statistics

The fourth Southern Regional Graduate Summer Session in Statistics will be held during the summer of 1957 from June 12 through July 20 at the Virginia Polytechnic Institute, Blacksburg, Virginia. The three previous sessions were held at the Virginia Polytechnic Institute, the University of Florida, and North Carolina State College in that order. In 1958, the summer session will be held at Oklahoma Agricultural and Mechanical College. Students who attended past sessions came from all of the forty-eight states, South America, India, Finland, Canada, Australia, Hawaii, China, the Philippines, and Africa. The enrollment at each of these sessions has exceeded one hundred graduate students.

The summer sessions are designed to carry out a recommendation of the Southern Regional Education Board's Committee on Statistics, on which the four institutions initiating the program are represented. The sessions will be of particular interest to (1) research and professional workers who want intensive instruction in basic statistical concepts and who wish to learn modern statistical methodology, (2) teachers of elementary statistical courses who want some formal training in modern statistics, (3) prospective candidates for graduate degrees in statistics, (4) graduate students in other fields who desire supporting work in statistics, and (5) professional statisticians who wish to keep informed of advanced specialized theory and methods.

Each annual summer session lasts six weeks and each course offered carries approximately five quarter hours of graduate credit. The program may be entered at any session, and consecutive courses will be offered in successive summers. The summer work in statistics may be applied towards residence requirements at any one of the cooperating institutions, as well as certain other institutions, in partial fulfillment of residence requirements for graduate degrees.

The faculty for the 1957 session at the Virginia Polytechnic Institute will include Evan J. Williams, Principal Research Officer, Commonwealth Scientific and Research Organization, Division of Mathematical Statistics, Melbourne, Australia; Daniel B. DeLury, Director of Statistics, Ontario Research Foundation, Toronto, Canada; J. L. McHugh, Director, Virginia Fisheries Laboratories; and the following staff members from the Virginia Polytechnic Institute: Willard O. Ash, L. S. Brenna, Ralph A. Bradley, C. W. Clunies-Ross, John E. Freund, Rudolf J. Freund, Boyd Harshbarger, Clyde Y. Kramer, and R. Lowell Wine.

Of particular interest at this summer session will be the lectures by D. B. DeLury on the Sampling of Biological Populations. This course will concern itself with the study of statistics of biological populations with specific reference to marine research. It will include some of the more recent research in this field by Dr. DeLury, and it will be accompanied by a laboratory conducted by J. L. McHugh dealing with problems, exercises, and discussions. E. J. Williams will give a course on the Analysis of Variance from the regression point of view with generalizations to multivariate analysis. Much of his lectures will deal with new material that he is now putting in book form. R. A. Bradley will be giving a course on Rank Order Statistics and will include some of the more recent research that he has published or is in the process of publishing in this field. J. E. Freund will give a course in Stochastic Processes, with particular reference to engineering applications. He will present many of the more recent advances in this field as well as his own research. The other graduate courses will include Probability by C. W. Clunies-Ross, Statistical Inference by W. O. Ash, Theory of Least Squares by R. L. Wine, Statistical Methods by C. Y. Kramer, Engineering Statistics by L. S. Brenna, and Sampling by R. J. Freund. Seminars, which will include many of the foremost statisticians in the eastern part of the United States, will be conducted each afternoon Monday through Thursday from 3:00 to 4:30. These seminars will be on some of the more recent research now being carried on in the field of statistics.

The total tuition fee will be $38.00 for the six-week term. Doctoral courtesy will be offered to those holding doctoral degrees. Living and other expenses at the Virginia Polytechnic Institute are reasonable.

Inquiries should be addressed to Boyd Harshbarger, Head, Department of Statistics, Virginia Polytechnic Institute, Blacksburg, Virginia.

Plans for 1957 Seminar

Present plans are to hold a two-week summer statistical seminar early in August with one week devoted to time series and a second week on the impact of computers on statistical problems. The general chairman is Dr. Milton E. Terry, Bell Telephone Laboratories, Murray Hill, New Jersey.

The organizing committee for the session on time series consists of Harry Press, N. R. Goodman, Leo Tick of New York University and A. O. Wheelon of Ramo-Wooldridge Corporation, Los Angeles.

The session on computers will deal with the application of computers to statistical problems in various fields. The following are members of the committee for this session: M. A. Woodbury, Chairman; H. O. Hartley and R. L. Anderson—Geology and Agriculture; E. Bleicher—Reliability and Quality Control; R. G. Miller—Meteorology; R. M. Kozelka—Education and Psychology; Z. Szatrowski—Business and Economics. The Secretary of

the committee is J. D. Culbertson, Equipment Statistical Section, Western Electric Corporation, Winston-Salem, N. C.

Rochester Quality Control Clinic

The 13th Annual Quality Control Clinic sponsored by the Rochester Society for Quality Control and the Rochester Chapter of the A. S. A. will be held February 19, 1957 at the War Memorial in Rochester, N. Y. For its part in the program, the local chapter of the A.S.A. has arranged a series of sessions on Industrial Experimentation. The speakers will be:

R. J. Hader	"Analysis of Variance for Linear and Multiple Regression"
H. O. Hartley	"Estimation from Incomplete Data"
G. E. P. Box	"Evolutionary Operations"
F. W. Wehrfritz	"Improving a Process Yield"

All four speakers will also engage in a panel discussion. Other speakers at the clinic include: R. L. Grunewald, Enoch Ferrell, N. H. Dagle, J. H. Toulouse, L. A. Seder, J. J. Riordan, J. M Juran, Mason Wescott, Louis Polk, W. M. Biklen, Dorian Shainin, P. A. Robert, A. S. Schultz, Jr., A. B. Mundel and R. G. Herd.

Registrations can be made through Mr. Carl Jensen, Industrial Management Council, 12 Mortimer Street, Rochester, N. Y. Hotel reservations can be made through Mr. William Lambert, same address.

SUMMER STATISTICAL SEMINARS

Report on 1956 Session

The 1956 seminar, sponsored by the ASA Section on Physical and Engineering Sciences, was held at the MIT Endicott House in Dedham, Massachusetts, August 13-24. The first weeks' session was devoted to time series with the following speakers: M. Rosenblatt, New York University and Indiana University, "A Random Model of the Sea Surface Generated by a Hurricane"; A. D. Wheelon, Ramo-Wooldridge Corporation, "Problems in Scatter Propagation"; N. R. Goodman, New York University, "Reliability of Cross-Spectral Estimates and Associated Functions"; R. F. Drenick, R. C. A., "Problems in Control Systems"; L. J. Tick, New York University, "Probability Methods in Ship Motion Analysis".

The second weeks' session was devoted to the application of high-speed computers to statistics with the following speakers: M. A. Woodbury, New York University, "Introduction"; J. Cameron, The National Bureau of Standards, "Experience on the SEAC"; R. W. Hamming, Bell Telephone Laboratories, "How to Control a Digital Computer"; D. A. Quarles, Jr., IBM Corporation, "IBM Statistical Programs"; Z. Szatrowski, IBM Corporation and University of Buffalo, "Desirable Specifications of Statistical Programs"; R. Slimak, Remington Rand UNIVAC, "Statistical Computations"; A. Holt and W. Turanski, Remington Rand and UNIVAC, "Compiling & Translating Programs for UNIVAC"; R. Miller, Travelers Weather Research Center, "Applications of Computers to Weather Problems"; R. L. Anderson, North Carolina State College, "The Impact of Computers on Statistical Analysis".

Other participants were: M. Bates, H. Glazer, E. L. Kaplan, E. W. Pike, W. L. Roach, Jr., G. L. Baldwin, J. E. Culbertson, R. M. Kozelka, N. Mantel, M. E. Terry.

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Samuel Weiss Memorial Fund

Contributions to the Samuel Weiss Memorial Fund have been coming in at a very good rate. However, there are many members of the Association who had planned to make their contributions after the first of the year. This notice is a reminder to send your contributions to the Samuel Weiss Memorial Fund, American Statistical Association, 1757 K Street, N. W., Washington 6, D. C. Please make your check or money order payable to the University of Pennsylvania.

Marshall Retires as Dominion Statistician

Herbert Marshall recently retired as Dominion Statistician, a position he had held for eleven years. He is being succeeded by Walter E. Duffett, former Director of the Research and Statistics Branch of the Department of Labor.

Mr. Marshall had been with the Dominion Bureau of Statistics for 34 years, coming to it from the University of Toronto where he had lectured in economics. His first work in the Bureau was the intensive development of price statistics. He was largely responsible for the first national census of merchandising in 1931. As Assistant Dominion Statistician he organized the wartime manpower records, this and other wartime services being recognized by the award of the OBE in 1946.

In addition to being president of the American Statistical Association in 1954, Mr. Marshall is president of the Inter-American Statistical Institute and is vice-president of the International Statistical Institute. He was also chairman of the U. N. Statistical Commission from 1947-1948.

Opportunities for Entrance Into the Federal Service

Economists and Statisticians, particularly those with academic training but little or no work experience, are reminded that the best way for them to enter the Federal civil service is by taking the Federal Service Entrance Examination. This includes those who are seniors in college, recent graduates and graduate students. Economists and Statisticians, as well as other specialists who take this general examination can be placed in fields of their specialization.

The next examination is scheduled for April 13, 1957 with the closing date for applications March 28. Other examinations have been announced for May 11, July 13 and August 10, the corresponding closing dates for applications being April 25, June 27 and July 25. Examinations will be given at various cities and towns throughout the country. It will be to the advantage of applicants to take the test as soon as possible so that their names may be entered on the list of eligibles for early consideration for appointment. Further information about the Federal Service Entrance Examination can be secured from the nearest U. S. Civil Service Commission office. Other information which will be helpful is contained in two pamphlets which may be obtained from the Civil Service Commission or from College Placement Offices —"Futures in the Federal Government," Commission's pamphlet No. 30, and "Facts About the Federal Career Service," Commission's pamphlet No. 60.

Persons with more work experience or with a doctor's degree should take the specialized examinations. These examinations are for specialized fields and do not require assembly for written examinations.

Job Openings For Statisticians

Several vacancies exist for Analytical Statisticians at the Ordnance Ammunition Command, U. S. Army, Joliet, Illinois. These positions offer challenging assignments in the application of statistical methods to inspection engineering and afford incumbents all Civil Service benefits. Starting salaries vary from $4,525 to $6,390 per year. Candidates should write the

Commanding General
Ordnance Ammunition Command
Joliet, Illinois

ATTN: Inspection Engineering Section

or visit the Command for additional information. Standard Form 57, Application for Federal Employment, will be accepted.

There is an opening for a Mathematical Statistician, GS-12, at $7,570 per annum, in the Ordnance Supply Demand Analysis Agency at Raritan Arsenal. The person selected would supervise the Statistical Analysis Section. He would direct the development, maintenance and improvement of statistical and mathematical procedures required to provide, and insure accuracy of, a wide variety of supply management statistics; render professional guidance on processing highly complex statistical formulae; and devise and conduct special studies requiring the application and adaptation of advanced mathematical statistical theories and techniques.

Inquiries should be addressed to Civilian Personnel Office, Raritan Arsenal, Metuchen, N. J., ATTN: Mr. Robert A. Yuhas.

Statistical Research Monographs

The Institute of Mathematical Statistics and the University of Chicago announces the establishment and co-sponsorship of a series of publications to be called *Statistical Research Monographs.*

The primary purpose of this series is to provide a medium of publication for material of interest to statisticians that is not ordinarily provided for by existing

media. It will help fill the gap between journal articles and textbooks or treatises. Among the kinds of publications envisaged are:

New research results too lengthy for the usual journal article. In particular, authors will have ample scope for detailed exposition of their findings.

Research results of interest in both theoretical and applied statistics. At present authors of such material frequently find it necessary to publish part of their results in a theoretical journal and part in an applied journal.

Expository monographs in particular areas of statistics.

Discussions of statistical problems and techniques in particular areas of application.

Every attempt will be made to maintain the highest standards of scholarship.

The members of the Editorial Board are David Blackwell, William G. Cochran, Henry E. Daniels, Wassily Hoeffding, Jack C. Kiefer, and William H. Kruskal (chairman). The Editor of the *Annals of Mathematical Statistics* is an ex-officio member of the Editorial Board. The Editorial Board will act as a group in its decisions on manuscripts.

Authors are invited to send manuscripts and correspondence concerning the series to William H. Kruskal, 127 Eckhart Hall, University of Chicago, Chicago 37, or to any of the other members of the Editorial Board.

Plans For New ASA Directory

Plans for a new membership directory of the American Statistical Association are now being made. The last directory was issued in 1954. Any suggestions for improving the new edition should be sent in at once to Donald C. Riley, Secretary-Treasurer.

A Standard Form of "Employer's First Report of Work Injury"

An important step forward in the field of workmen's compensation and work injury statistics was taken when a new standard form of Employer's First Report of Work Injury for use by state workmen's compensation agencies was adopted by the International Association of Industrial Accident Boards and Commissions at its 42nd annual convention held in Charleston, South Carolina, December 2-6, 1956.

The form was designed by the Committee on Statistics of the International Association of Industrial Accident Boards and Commissions in consultation with the Committee on Statistics of the International Association of Governmental Labor Officials and with representatives of the American Standards Association, the Association of Casualty and Surety Companies, the National Association of Mutual Casualty Companies, the National Safety Council, and the U. S. Public Health Service.

In designing the form, the Committee had before it the following statement of principles adopted by the Association in 1954:

1. It is in the public interest and therefore, a direct responsibility of the Federal and State governments to foster and promote safety in industry, not only through the enforcement of safety laws and regulations, but also by stimulating, encouraging, and assisting employers and workers in industry in the development of safety programs of broader scope than mere compliance with such laws and regulations.

2. This governmental responsibility is not restricted to the agencies which are directly assigned the function of enforcing safety laws and regulations, but extends to all Federal and state agencies which have among their resources materials, information, or technical facilities which may be useful in the advancement of work safety in employment.

3. Injury and accident statistics are essential elements of any accident prevention program. They establish the need for the program and justify the necessary appropriations and expenditures; they serve as guides in the planning and in the operations of the program; and they measure the success of the program.

4. The most valuable statistics in accident prevention are those which reflect the combined experience of many employments and many employees to provide a broad overall evaluation of the work-accident problem, but which can be broken down into significantly detailed groupings for specific application in particular safety program operations. National summary statistics are essential, but national data alone cannot meet the needs of the safety movement.

5. The need for injury and accident statistics reflecting the experience within each state has been expressed repeatedly in the reports of the IAIABC and the IAGLO. It has also been expressed in resolutions of the National Conference on Labor Legislation, in the President's Conference on Occupational Safety, and in the many governors' conferences on occupational safety held in recent years. Technical difficulties, primarily that of obtaining adequate coverage, impose sharp limitations upon the development of adequate state statistics by the Federal Government or by any private agencies. The need can be met only through action by state agencies.

6. Sound statistical practice in government operations calls for intensive utilization of all available data and the avoidance of requests for duplicate reporting of identical or essentially similar information whenever possible. It is, therefore, incumbent

upon all agencies which receive reports to review all the possible uses which those reports might serve, and, insofar as possible, to make the reports available for those purposes.

In addition, the Committee on Statistics took into consideration the following recommendations of the IAIABC:

A. That the appropriate agencies in each state make every possible effort to service the safety movement by providing injury and accident statistics for their respective jurisdictions.

B. That the state injury and accident statistics include certain basic tabulations of reported injuries and occupational diseases.

C. That the development and presentation of these statistics follow standardized patterns so that the data may be comparable from one jurisdiction to another and may be combined into national totals.

D. That the burden of reporting imposed upon employers be minimized insofar as possible by the utilization of existing data and reporting systems. The State Workmen's Compensation Agencies and the State Labor Departments and Industrial Commissions were urged to give serious consideration to the use of workmen's compensation reports as a source of information regarding the nature and source of work injuries and of the basic data concerning the accidents which produce those injuries.

When the form was presented to the convention in Charleston, South Carolina, the Committee indicated that it was also guided by the following principles and considerations:

1. The basic purpose of the form is the expeditious administration of workmen's compensation insurance claims.

2. Properly designed, the form can be a valuable source of information regarding the nature and source of injuries experienced in employment and of basic data concerning the accidents which produce those injuries.

3. The aim was to include adequate questions relating to the occurrence of the injury without any prima facie implications of responsibility for the accident; to include only questions which could be answered by facts readily available to the reporter and which involve no statements of a controversial nature.

4. It was considered desirable to exclude questions relating to the violation or observance of safe practice or guarding requirements, the existence of fault either by the employer or employee, or to the required accident prevention action.

The report of the Committee concluded with these observations:

The Committee is convinced that statistics compiled from the information reported in the form will yield valuable data regarding the nature and source of work injuries and the accidents which produce those injuries. These data will be extremely helpful to those concerned with accident prevention.

The use of the form for this purpose will avoid the necessity for duplicate reporting of identical or essentially similar information.

Use of the standard form by all jurisdictions, together with uniform basic tabulation procedures, will insure comparability of data from one jurisdiction to another and will make it possible to combine the figures for the respective jurisdictions into national totals.

Use of the form will go a long way toward achieving the objectives set forth in the statement of principles adopted by the Association two years ago.

The members of the Committee on Statistics of the IAIABC were:

Irving Fogwill, Newfoundland, Canada
Albert A. Fraser, Vermont
Orrin A. Fried, Wisconsin, Vice-Chairman
Maurice I. Gershenson, California, Chairman
Frank S. McElroy, Washington, D. C.
J. A. Paskiewicz, Illinois
Donald Summers, Florida

Copies of the report and the form may be secured from:

Paul Gurske, Secretary-Treasurer
International Association of Industrial Accident Boards and Commissions
Director, Bureau of Labor Standards
U. S. Department of Labor
Washington 25, D. C.

The report will also be printed in the proceedings of the 42nd annual convention of the IAIABC.

New ASA Districts

As a result of the decision to redistrict the Association on a geographical basis, made at the September meeting of the Board and Council (reported in the October issue of *The American Statistician*), ten districts have been established, covering the United States (including the Territories) and Canada. Since each district has two representatives on the Council, this has increased the size of that body by eight more members. The redistricting provides better representation and insures that members not in chapter areas will also

have a vote for representatives from their district. (The newly-elected representatives for each district are shown elsewhere in this issue.) The new plan is to be tried for two years, after which it will be re-examined by the Council.

There follows a list of the new districts, showing for each its geographical area and the chapters included in it, and a map.

1. New England States (except members of New York City Chapter)
   (Chapters: Connecticut, Boston);
2. New York State (except New York City and members of that chapter), Ontario, Quebec, Maritime Provinces
   (Chapters: Buffalo-Niagara, Albany, Ithaca, Rochester, Montreal);
3. New York City, including members of the chapter living in the metropolitan and commuting areas, and Puerto Rico
   (Chapters: New York City, Puerto Rico);
4. New Jersey (except members of New York City Chapter), Pennsylvania, Delaware (and Eastern Shores)
   (Chapters: Central New Jersey, Philadelphia, Pittsburgh, State College, Pa.);
5. Maryland, District of Columbia, metropolitan and commuting areas of Washington, D. C. in Northern Virginia
   (Chapters: Washington, D. C.);
6. Virginia (except as in 5), West Virginia, Kentucky, North Carolina, Tennessee, South Carolina, Georgia, Alabama, Florida
   (Chapters: Virginia, North Carolina);
7. Ohio, Michigan
   (Chapters: Detroit, Cleveland, Columbus, Dayton);
8. Indiana, Illinois, Wisconsin, Minnesota, Iowa, the eastern part of Missouri
   (Chapters: Central Indiana, Chicago, Urbana, Ill., Milwaukee, St. Louis);
9. Alberta, Manitoba, Saskatchewan, North Dakota, Montana, South Dakota, Wyoming, Nebraska, the western part of Missouri, Kansas, Colorado, Arkansas, Oklahoma, New Mexico, Mississippi, Louisiana, Texas
   (Chapters: Denver, Tulsa, Oklahoma City, New Orleans, Austin, North Texas);
10. Alaska, British Columbia, Idaho, Washington, Oregon, Utah, Nevada, California, Arizona, Hawaii
    (Chapters: Sacramento, San Franicsco, Southern California, Hawaii).

Districts of the American Statistical Association

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FEDERAL STATISTICAL ACTIVITIES

1958 Budget Recommendations for Principal Federal Statistical Programs

Budget recommendations for principal Federal statistical programs for fiscal year 1958 are summarized in Special Analysis J of the 1958 Budget Document, presented to the Congress on January 16. For current programs, $35.2 million is recommended for 1958, of which about $3.4 million represents increases for specific programs. Recommended program changes of general interest are described in the following paragraphs, by broad subject areas.

Labor statistics: A net increase of nearly $300,000 is proposed for expansion or improvement of specific programs within the Bureau of Labor Statistics, including provision for a study of the effects of tariff changes on employment in the United States, strengthening the industry wage survey program in important nonmanufacturing industries, case studies of the technological displacement of older workers, and completion of the cooperative Federal-State program of labor turnover statistics.

Demographic statistics: Increases of almost $650,000 are included, representing full-year costs of the new National Health Survey, and the expanded statistical and research program of the Office of Education, being initiated this year.

Prices and price indexes: Increases of almost $250,000 are requested for development of a program designed to improve the Department of Agriculture indexes of prices paid and received by farmers, and for the initiation of surveys of consumer expenditures in four to six cities each year by the Bureau of Labor Statistics.

Production and distribution statistics: Increases of nearly $1 million are recommended in the Department of Agriculture, primarily for the production economics research program conducted by the Agricultural Research Service to provide economic data needed for the development and appraisal of farm programs, including research on the financial condition, land ownership and tax burdens of different groups of farmers. Increases of about $300,000 are also recommended in the Bureau of the Census for projects designed to improve the accuracy and usefulness of the foreign trade statistics program, for annual publication of County Business Patterns, and for expansion and improvement of the monthly data on manufacturers' sales and inventories.

Construction and housing statistics: No increase is proposed for the construction statistics program in the 1958 budget, pending completion of a comprehensive review now being made of the Government's work in this area and reformulation of a program designed to provide more comprehensive and more accurate measures of this important segment of the economy.

National income and business financial accounts: Increases totaling nearly $650,000 are requested, to provide for preparation by the Internal Revenue Service of preliminary tabulations of key financial items in the income tax returns, so that these business indicator statistics may be made available a year earlier than at present; to extend the quarterly financial reports program, conducted jointly by the Federal Trade Commission and the Securities and Exchange Commission, to include trade and mining corporations; and to provide regular collection by the Agricultural Marketing Service of data on farm income and production expenditures, for use in keeping the parity index up to date and in preparing National and State estimates of farm income.

In addition to these recommendations for current programs, the 1958 budget requests $1.8 million for preparatory work for the 1958 censuses of business, transportation, manufactures and mineral industries, and $4.1 million for preparatory work for the 1960 censuses of population, housing and agriculture.

Single copies of Special Analysis J, on Principal Federal Statistical Programs, may be obtained from the Publications Unit, Bureau of the Budget, Washington 25, D. C.

—Raymond T. Bowman, Assistant Director for Statistical Standards, Bureau of the Budget

National Housing Survey

The Bureau of the Census is now engaged in making the National Housing Inventory, for which $1 million was appropriated last year to meet the need for benchmark housing data in the intercensal period. The inventory will provide housing data for: (1) the Nation, including (a) all standard metropolitan areas combined and nonstandard metropolitan territory, (b) each of the four regions of the country, and (c) urban and rural territory; and (2) each of nine selected metropolitan areas. The nine metropolitan areas, chosen to give representation to the amount and rate of growth since 1950 and to geographic dispersion throughout the country, are: Atlanta, Boston, Chicago, Dallas, Detroit, Los Angeles, New York, Philadelphia, and Seattle.

In addition to providing the first measurement of the Nation's housing supply since the 1950 Census of Housing, the inventory will obtain information on (1) the types of change which have occurred in the housing inventory since 1950; (2) the financing of owner-occupied residential properties; and (3) housing characteristics of the 1956 inventory.

Components of change

This phase of the survey provides not only a count of the nation's dwelling units as of December 1956 but also, for the first time, information accounting for the following types of change in the housing inventory: conversion of one dwelling unit into two or more; merger of two or more dwelling units into a smaller number; demolition, destruction by fire, flood, etc.; and other

types of withdrawal from the housing supply (shift from residential to nonresidential use, abandonment, etc.). Additions to the housing supply will also be accounted for (new construction, conversion to residential use, etc.).

Measurement of these components of change is based upon enumeration of every dwelling unit now existing within the boundaries of 20,600 small land segments located in 638 counties and independent cities in all 48 states—a total of approximately 255,000 dwelling units. For each segment the enumerator compares the 1956 information with that for the identical area in 1950, indicates the source of each new unit, and the present situation of each unit enumerated in 1950. To assure greater accuracy this technique has been supplemented in two ways: (1) adequate representation of new construction in large subdivisions or apartment and rental development projects, through delineation in each of the 638 counties of all clusters of 25 or more units built since 1950, and inclusion in the sample of 5,200 land segments containing approximately 52,000 of these new dwelling units; and (2) adequate representation of structures lost since 1950, through checking of approximately 11,709 clusters of units enumerated in 1950 to determine whether or not the structure is still used for residential purposes.

Financing of owner-occupied properties

This phase of the survey brings up to date information on the financing of home ownership, principally in terms of mortgage financing. As in the 1950 Census, the schedule covering this information is filled in by the homeowner and collated with information obtained in the personal interview for the housing characteristics schedule. Some additional information is being obtained for unmortgaged properties on such items as taxes, year property was acquired, and veteran status of owner, for comparison with similar information available for mortgaged properties.

The owner-occupied properties schedule is secured for all owner-occupied dwelling units in the sample, including approximately 11,000 mortgaged and 7,000 unmortgaged properties in the national sample. Only national data will be available for this phase of the survey except for the Philadelphia Standard Metropolitan Area, where the University of Pennsylvania has contracted for expansion of the program.

Housing characteristics

This phase of the survey is basically similar to the 1950 Census. Information is being collected on such characteristics as condition, water and plumbing, rooms, occupancy status, rent or value, income, and age and sex of head of household. New information is being collected from households that moved during the calendar years of 1955 and 1956, to provide some information on mobility within metropolitan areas and between States, and on the tenure, value or rent, and farm-nonfarm status of the previous residence.

The characteristics information is being collected by personal enumeration of a sample of dwelling units in each of the 20,600 land segments. An average of about 3 schedules is obtained in each segment, providing data from approximately 57,000 units.

Tabulating methods and time schedule

The schedules for collecting information on components of change and on housing characteristics have both been designed for processing by the system known as FOSDIC (film optical sensing device for input to computers). Tabulations from these two schedules will be made by electronic computer, and tabulations from the owner-occupied properties schedule by conventional tabulating equipment.

Initial results from the National Housing Inventory are expected to be available before June 30, and final results by the fall of 1957.

—Wayne F. Daugherty, Chief,
Housing Division,
Bureau of the Census,
Department of Commerce

New Edition of U.S. Historical Statistics Planned

Work has been started on a new compilation to replace the first edition of *Historical Statistics of the United States, 1789-1945*. The first volume has established itself as a standard reference work since its initial printing in 1949. It has gone through five printings, with more than 23,000 copies distributed, and has been supplemented by a *Continuation to 1952*.

Despite the continued sales of the first edition and its supplement, however, there is need for a completely revised edition. The first volume was largely limited to historical series readily available from Government sources, and some major fields were therefore omitted or inadequately covered. The series which were presented need to be brought up to date or replaced by revised or superseding series. In the preparation of the new volume, subjects already included will be carefully reviewed to achieve fuller coverage, and additional subjects will be included—such as consumer income and expenditures, social insurance, education, crime and correction, recreation, climate, communications, domestic trade and services, business enterprise, productivity, and military affairs. Series now lapsed but important to the study of earlier periods will be brought in, and textual materials will be improved and expanded.

In the planning and compilation of the new volume, the Bureau of the Census again will work closely with other Federal statistical agencies and with the Social Science Research Council. The Council has appointed a committee to advise the Census Bureau, and is administering a grant which includes provision for outside consultants to develop materials on selected fields. Members of the committee are: G. Heberton Evans (chairman), Johns Hopkins University; Otis Dudley Duncan, University of Chicago; Solomon Fabricant, National Bureau of Economic Research; Maurice I. Gershenson, California Department of Industrial Relations; Richard M. Scammon, Governmental Affairs Institute; Willard

L. Thorp, Amherst College; and Harold F. Williamson, Northwestern University.

Present plans call for completion of all phases of the project in two years, and publication of the new volume early in 1959.

—Edwin D. Goldfield, Chief,
Statistical Reports Division,
Bureau of the Census,
Department of Commerce

Recent Publications

Older Worker Adjustment to Labor Market Practices—An Analysis of Experience in Seven Major Labor Markets (Bulletin BES No. R151), issued by the Bureau of Employment Security, Department of Labor. Report on a comprehensive survey of employed and unemployed older workers, presenting data on the characteristics and work experience of job seekers in local employment offices and of employed workers, and information on labor turnover by age groups. The survey was made by the Bureau of Employment Security in cooperation with seven affiliated State employment security agencies and four universities. The seven areas studied were: Worcester, Philadelphia, Miami, Detroit, Minneapolis-St. Paul, Los Angeles, and Seattle. The study is part of the Department of Labor's Older Worker Program, directed toward increasing job opportunities for older workers. Available from Superintendent of Documents, Government Printing Office, Washington 25, D. C., at $1.25 a copy.

Counseling and Placement Services for Older Workers (Bulletin BES No. E152), issued by the Bureau of Employment Security, Department of Labor. Results of a study of operating aspects of public employment office services to older workers, made as part of the Department of Labor's Older Worker Program at the same time and in the same seven areas as the survey described above. Available from Superintendent of Documents, Government Printing Office, Washington 25, D. C., at 50 cents a copy.

Pension Costs in Relation to the Hiring of Older Workers (Bulletin BES No. E150), issued by the Bureau of Employment Security, Department of Labor. Another report resulting from the Department of Labor's Older Worker Program, presenting an overview of pension and insurance plans in effect in private industry and how the cost of various plans may be affected by the employment of older workers. Available from Superintendent of Documents, Government Printing Office, Washington 25, D. C., at 25 cents a copy.

Partnerships 1953 and *Corporations 1954*, News Releases issued by the Internal Revenue Service, Department of the Treasury. Summary data on receipts and profits, classified by industry, for nearly 1,000,000 partnerships for 1953 and for over 700,000 corporations for 1954. The partnership data are the first available since 1947, and the corporation data (published annually) have never been issued so promptly. More complete tabulations will be published later in the "Statistics of Income" series. The News Releases are available without charge from the Public Information Division, Room 1312, Internal Revenue Service, Washington 25, D. C.

Birth Registration Completeness in the United States and Geographic Areas, 1950—Part III. Data for Detailed Characteristics, issued by the National Office of Vital Statistics, Public Health Service. Report providing measures indicating the extent of underreporting of births in the 1950 Census of Population, classified by ages of parents, education of mother, birth order, race and occupation of father. Corresponding data by age and education of mother are shown also for 1940. Available from Superintendent of Documents, Government Printing Office, Washington 25, D. C., at 30 cents a copy.

National Survey of Fishing and Hunting (Circular 44), issued by the Fish and Wildlife Service, Department of the Interior. Report on the first nationwide economic survey of sport fishing and hunting in the United States, made by Crossley, S-D Surveys, Inc., under contract to the Fish and Wildlife Service. The report presents information in graphic and tabular form on the number of men and women who fished or hunted in calendar year 1955; variations by geographic sections, population densities, and age groups; amount of time and distance travelled for hunting and fishing; and expenditures in connection with the sport (equipment, trip expenditures, license and lease fees, etc.). There is also a brief statement on the technique of the survey and indication of the statistical reliability of the major findings. Available from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., at 40 cents a copy.

Science and Engineering in American Industry—Final Report on a 1953-54 Survey (NSF 56-16), issued by the National Science Foundation. Report presenting the findings of a survey conducted by the Bureau of Labor Statistics for the National Science Foundation, as part of a national survey of research and development resources. The survey included a mail questionnaire to a sample of about 11,600 companies in all manufacturing and most other nonagricultural industries, and personal interviews with research officials of about 200 large corporations. Available from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., at 70 cents a copy.

The Federal Research and Development Budget, Fiscal Years 1955, 1956 and 1957 (NSF 56-19), issued by the National Science Foundation in its continuing series on *Federal Funds for Science*. The report analyzes Federal scientific research and development budgets according to administering agencies, scientific fields and character of work, and presents figures on the obligation of Federal funds for research and development in the Government's own laboratories, in profit organizations, and in nonprofit organizations including educational institutions. Available from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., at 35 cents a copy.

TEACHING OF STATISTICS IN EGYPT*

A. E. SARHAN
University of North Carolina and Cairo University

There have been recent noteworthy developments in establishing an advanced statistical institution in Egypt. This center is to serve Egypt and the Middle East in so far as possible. To study its development, it is worthwhile to examine the teaching of statistics in Egypt in the past, present and future.

I. *Past:* Statistical teaching was introduced in Egypt in 1923 in the Faculty of Commerce, Cairo University, on an elementary basis as a part of an economics course. Students were taught the calculation of averages, dispersion, correlation coefficients as well as applied statistics such as census statistics, vital statistic, index numbers of prices and foreign trade statistics. This situation prevailed until 1933.

In each country, the development and advancement of statistics are usually promoted by a person who struggles to form a school. In Egypt, in 1933, this person was Dr. A. M. N. Shafei. He was the first Egyptian to return from abroad having a Ph.D. in statistics (England).

Dr. Shafei was appointed a lecturer in the Faculty of Commerce, Cairo University. The mathematics courses that are required for learning and understanding statistics were introduced. Students were encouraged to carry on outside surveys and research work. For example, they collected and analyzed data on wages ad hours for workers. In 1938, Dr. Shafei published the first text in statistics written in Arabic in two volumes. Volume one is of a mathematical nature and includes: index numbers; frequency distributions; measures of central tendency and dispersion; moments; correlation and regression; sampling; significance tests, t, F, χ^2, and analysis of variance. The second volume deals with applied statistics and includes: time series; vital; internal and foreign trade; agricultural and industrial; cost of living; and national income statistics.

This textbook was an important contribution because it made statistics available in Arabic. It became possible for students to understand and learn more statistics than could be introduced in teaching. In fact, these two volumes were a useful addition to the Arabic literature, because they translated expressions of statistical terminology for the first time to the Arabic language. Since then there have been several other books in statistics written in Arabic but the original book is still, after its new editions, the most widely used text in the Arabic countries.

* EDITOR'S NOTE: Articles similar to this one concerning the development of statistics in other countries are invited.

Dr. Shafei succeeded in sending some of his students abroad for advanced training. They returned with doctoral degrees to teach statistics in Cairo University. Courses in statistics were given to other sections of the Faculty of Commerce and were developed so that it soon became possible to earn a Masters degree in Applied Statistics. Lectures in statistics and probability were introduced in courses of mathematics for students in the Faculty of Science.

In 1942, Alexandria University was established and statistics courses were introduced by the Faculty of Commerce. The lecturers had returned from abroad with degrees in statistics.

II. *Present:* Dr. Shafei found that there was continued need for more statistics in many different fields. He suggested and succeeded in establishing the post-graduate Institute of Statistics which was attached to the Faculty of Commerce, Cairo University, in 1947.

Students who had graduated from any Egyptian or other recognized college were admitted. A successful course of two years was required for students to receive a diploma in statistics. The teaching was done in evenings for 12 hours per week. For the first year, the courses included: statistical methods in research; applied statistics; statistical laboratory; and choice of special mathematics courses for students not qualified in mathematics as well as special economics courses for students qualified in mathematics.

These courses were organized briefly as follows:

Statistical methods in research. This included: collecting data, graphical and tabular representation of data; frequency distributions; averages; dispersion; correlation and regression; sampling techniques; use of elementary significance tests; logic; and statistical inference.

Applied statistics. This included: application of statistical methods to the fields of vital statistics, business, finance, economics, sociology, agriculture and education.

Statistical laboratory. Use of logarithmic tables; use of calculating, sorting and punching machines; calculation of moments; skewness and kurtosis; curve fitting; linear and non-linear regression; partial and multiple correlation.

Mathematics: Higher algebra; analytical geometry; differential and integral calculus.

Economics: Elementary theory; value; production; distribution; money.

For the second year, the courses given were:

1) Theory of statistics
2) Calculus of observations

3) Statistical laboratory
4) One of the following optional subjects: mathematical statistics; insurance; genetics; econometrics; demography.

In theory of statistics, there were probability; frequency distributions; theory of correlation; significance tests; analysis of variance; design and analysis of experiments. *In calculus of observations:* interpolation; curve fitting; analysis of time series.

In mathematical statistics: theory of estimation; least squares and maximum likelihood; testing of an hypothesis; other selected topics.

In 1949, 13 students were graduated for the first time from the Institute. The succeeding years there were the following numbers graduated: 17 in 1950; 16 in 1951; 18 in 1952; 20 in 1953; 28 in 1954; and 9 in June 1955. A total of 121 students, therefore, were graduated from the Institute by June, 1955. The students were from many fields, including 64 from agriculture, 30 from commerce, 8 from the army, 7 from science, 6 engineers, 2 in medicine and 5 from miscellaneous fields. (One student was classified in two fields.)

Graduates of the Institute were sent abroad to advance their studies at the doctoral level. As of 1956, three of them have obtained doctoral degrees in statistics, two from the Consolidated University of North Carolina. The author had the great fortune of being one of the latter two. Others are now working in t'e U. S. and England for their degrees. Several other graduates have also obtained Master of Science degrees in the U. S. and England.

The graduates established in 1954 the Egyptian Statistical Association. The first and only president is Dr. Shafei.

At present, in Egypt and neighboring countries, there is tremendous emphasis placed upon statistics by government agencies and business firms. All are demanding more and better statistics and are seeking to hire efficient and experienced statisticians. This is especially true at the high government levels that are engaged in national planning. Thus, there has been a recognized need for promoting the teaching of advanced statistics in the countries of the region.

III. *Future and Proposed Development:* The need for more statistics has also been realized by people working in international agencies. A suggestion for establishing an advanced statistical center for the Middle East was discussed at the meeting of the International Statistical Institute (ISI) in Brazil, in June 1955.

Professor Gertrude Cox, Director of the Institute of Statistics, University of North Carolina, 1956 President of the American Statistical Association, and Treasurer of ISI, has a keen interest in international development of statistics. She is anxious to see more centers of the type described here. Miss Cox contacted Dr. Shafei concerning the ISI discussion and provided suggestions of possible financial help for consideration by the authorities in Egypt.

The appreciation of the President of Cairo University and all concerned to Professor Gertrude Cox for her interest and willingness to help is herein expressed.

Dr. Shafei took the responsibility of communicating these ideas to the President of Cairo University. He stayed in touch with Miss Cox and several international and private agencies that might profit from the establishment of this statistical center.

The President of Cairo University, Dr. Kamel Moursy, was immediately interested in developing the project. He promptly obtained the approval of the University Council for the program in advanced statistical studies having the Institute of Statistics in Cairo University as its nucleus. The proclaimed aims of this center are as follows:

(1) To offer advanced courses in all fields of statistics, both applied and theoretical, to prepare students for higher degrees in statistics.

(2) To offer statistical services and technical advice to governments and business organizations.

(3) To promote research in statistics and to help research workers to develop and make use of their statistical talents.

(4) To help promote the development of statistical systems and organizations in the countries of the region by offering technical assistance and advice as well as by arranging periodical scientific meetings and discussing technical questions and exchanging ideas concerning local difficulties.

The first objective will be fulfilled by offering additional courses in the different fields of statistics and preparing talented scholars to obtain higher degrees in these fields.

The teaching will consist of advanced experimental statistics, advanced experimental designs, advanced sampling, multivariate analysis and its application, advanced probability and stochastic processes, order and non-parametric statistics, decision functions, sequential analysis, time series, demography, and vital and health statistics.

The staff consists of 15 Egyptians who are all well qualified for teaching and guiding research in different fields. Most of the staff have other duties as well and will participate only on a part-time teaching basis. For this reason, it is contemplated that at least two visiting professors will be needed annually.

Fellowships and research grants will be offered to students from the countries of the region.

The library in statistics is being brought up to date

in related fields as well as in statistical methods. Arrangements are being made to send some of the more talented graduates abroad for further study and research. Members of the staff will also have the opportunity for such visits to become acquainted with recent developments. There is an arrangement for foreign consultants to help solve statistical problems. Periodic meetings and statistical articles will be issued to help advance teaching and research.

The need for such a center for Egypt and its neighboring countries is realized by all concerned. In fact, at the Statistical Seminar for the Arab States, sponsored by the United Nations in cooperation with the Arab League which was held in Cairo, November 19 to December 1, 1955, the immediate need for such a center was stressed and a recommendation for establishing it was made.

The contacts of Dr. Shafei with agencies both inside and outside Egypt have already resulted in securing some of the fellowships mentioned above.

The Permanent Council for Public Services has approved four fellowships to students working for Masters degrees in fields relevant to the research of the Council. The Council for National Production is expected to take similar action in a short time.

The Arab League Secretariat has submitted to the Council a request for granting six fellowships for students from the Arab countries (non-Egyptians). Lastly, several departments of the Egyptian government will offer scholarships for students to work in certain fields.

The WHO regional office in Alexandria has shown interest in the project, particularly in the courses of population, vital and health statistics. It has offered the help of Dr. Pirc, regional health statistician, in teaching a part of this course. The regional office has also approved the idea of giving fellowships to students from the region, beginning September 1956, to attend this course and related courses for the purpose of earning a degree.

Cairo University has found it desirable to have a Board of Studies to design and improve the different courses, to select students for fellowships and to arrange for the research work. This Board of Studies is now established with Dr. Shafei as chairman. Professors of statistics in the Egyptian Universities, professor of mathematics and economics and the visiting professors are the other members. The fields which the teaching and research will cover are: Mathematical, Vital and Health, Agricultural, Social and Economic Statistics.

The whole plan was approved (for a period of 3 years, 1956-1959) by the Egyptian Committee on United Nations Technical Assistance and then submitted to the U. N. Technical Assistance Administration. The project has been approved by the U. N. and arrangements are presently being made to supply the library with the most recent books in various statistical fields as well as back issues of statistical journals. There has also been an allotment for the purchase of laboratory equipment. At least two visiting professors will be made available each year during the development period. There will also be two fellowships for staff members to travel abroad for visiting statistical centers in the world.

When the center is in full operation, it will contribute greatly to the area of statistical knowledge and research. This center has been planned in order to be of importance in the development of statistics, both theoretical and applied, on an international basis.

A NOTE ON THE t TEST

Robert H. Knapp
Wesleyan University

It is a common problem in experimental psychology and other similar disciplines to require the application of the *t* test to the comparison of the means of one or more control groups with one or more experimental groups. The purpose of this note is to describe a method whereby the *t* test may be applied with greater economy of time and effort than required with the conventional formula. It is valid only if the N of the two samples is equal and no correlation between them is involved. But this is a common condition, and I believe the procedure recommended here cuts down time of computation to a quarter or less. Only one division is required and only one square root must be obtained. If the table of F is employed instead of t, then no square root need be extracted whatever.

The development of this formula is not mathematically involved and depends upon the employment of simple algebra. The formula recommended for the conditions described above is as follows:

$$t^2 = F = \frac{(N-1)\ (a-b)^2}{Nc-(a^2+b^2)}$$

Where N = the number of cases in *each* sample:
a = the sum of X_1
b = the sum of X_2
c = the sum of X_1^2 plus the sum of X_2^2

It should be further noted that this formula is very well suited to data computed on standard automatic calculators, since the sums specified are (with the exception of c) to be taken directly from the machine. This formula also eliminates the necessity (though not the possibility) of computing the means of the two arrays.

QUESTIONS AND ANSWERS

Edited by ERNEST RUBIN
U. S. Department of Commerce and American University

The Soviet Population of 1956

Discussion by NAUM JASNY

A statistical event in 1956 was the issuance of a Soviet statistical handbook by the U.S.S.R., the first of its kind since 1939. Among the data in this book was an estimate, not a census count, of the Soviet population as of April 1956. This estimate, 200.2 million, was substantially lower than projections of Soviet population that had been made for postwar years. The official Soviet estimate of population is about 20 million smaller than had been anticipated by most Western observers.

The accuracy of population estimates, projections, as well as censuses is primarily a function of variables that cannot be incorporated into mathematical equations. Almost twenty-five years ago competent demographers predicted a U. S. population in 1950 of 143 million instead of the reported 151 million. More recently it has been indicated that the U. S. census of 1950 fell short of complete enumeration by at least 5 million.[1]

The discrepancy between the official Soviet and non-official estimates of U.S.S.R. population is substantial and should not be minimized. Dr. Naum Jasny, dean of scholars of the Soviet economy and its statistics has kindly prepared the following discussion.[2]

* * * * * *

The error of overestimating the postwar Soviet population by some 20 million is unique in that hardly a dissenting voice was heard up to the time of publication of the latest Soviet statistical handbook in June 1956. The official estimate of the Soviet population on page 17 of *National Economy of the U.S.S.R.* 1956 (hereafter referred to as *Statistical Handbook, 1956)* are: 1940 (month not stated), 191.7 million; and April 1956, 200.2 million.

The new official data on the net growth of population (*Statistical Handbook, 1956,* page 243) implies a population of 193 to 196 million in July 1, 1941, when the Soviet Union entered World War II. The Soviet population was, however, probably closer to 200 million in 1941.

The official population figure for April 1956, in conjunction with the new data on vital statistics (*Statistical Handbook, 1956,* page 243) implies a population of 179.6 million on Januaray 1, 1950, indicating a decline of about 20 million in 8.5 years after the entrance of the U.S.S.R. in World War II. No population figure for any intermediate year is either given in the *Statistical Handbook, 1956,* or can be calculated from its data.

The following losses can be specified:

a) 7 million lost according to Stalin, interpreted by Eugene Tarle as involving military losses;

b) large wartime exodus from the U.S.S.R. to all parts of the world;

c) heavy mortality of Soviet civilians in German concentration camps (such deaths of the men in the armed forces may have been included in Stalin's figure).

The total of the three items may well have amounted to 10-11 million. The balance of about 9-10 million of lost population, over and above new births, must represent a decline in civilian population. Perhaps one million of this lost population, resulted from the heavy mortality in besieged Leningrad.

The Soviet civilian population suffered from malnutrition during World War II. The rations distributed to the urban population in 1943 (in calories per day): [3]

War Workers	1,900
Manual Workers	1,700
Office Workers	1,300
Dependents and Children Over 12 Years of Age	800
Children Below 12 Years of Age	900

The prices in the free markets were extremely high; any supplementing of the rations from this source was excluded for the bulk of the population.[4] If one does not die on these rations rapidly one does it slowly.

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[1] Coale, Ansley J. "The Population of the U. S. in 1950—A revision of Census Figures," Journal of the American Statistical Association, Vol. 50, No. 269, March 1955, pp. 16-54.

[2] Dr. Jasny wishes to thank Mr. Michael Roof of the Reference Department of the U. S. Library of Congress and Mr. Harold Wool of the Office of U. S. Secretary of Defense for their comments on this paper.

[3] U. S. Department of Agriculture, *The Food Situation,* May 15, 1954.

[4] Officially the prices in so-called kolkhoz markets increased as compared with 1940 12.6-fold for crops and 13.2-fold for animal products (See N. A. Voznesenskii, *The War Economy During the Patriotic War,* Moscow, 1948, p. 129), but the prices in these markets were very high already in 1940.

While malnutrition contributed directly to mortality it also added to mortality resulting from epidemics. (Soviet medical literature denied heavy losses from epidemics).

The end of war did not end starvation. The harvest of 1945 was a wartime harvest and the 1946 farm output was, if at all, only little better. Starvation did not indeed end before the 1947 harvest was brought in. It does not appear likely that the birth rate began to increase before 1948.

Statistical Handbook, 1956, page 243, gives the following data for the birth and death rates and the net growth of the population (per 1,000):

Year	*Birth rate*	*Death rate*	*Net growth*
1913	47.0	30.2	16.8
1926	44.0	20.3	23.7
1940	31.7	18.3	13.6
1950	26.5	9.6	16.9
1955	25.6	8.4	17.2

The meager and uncertain evidence on school enrollment *(Statistical Handbook, 1956,* page 224) indicates a precipitous decline in the birth rate since Soviet Russia's entrance in World War II.

At the same time the death rate must have increased considerably. It would not be unexpected if the death rate reverted to the level of 1913 (30 per 1,000). In the worst years, say 1943-44 (very bad crop year) and 1944-45, the death rate probably exceeded this level. In this year the civilian population may well have declined by substantially more than 2 million, perhaps by as much as 3 million.

In a report in *Pravda,* April 23, 1949, the first of this kind in postwar years, it was claimed that the 1948 death rate was 27 percent below that of 1947 and 12 percent below that of the last prewar years. The decline by 27 percent implies an insignificant growth in population in 1947. The decline in the death rate must have continued also in 1949 and even in 1950.

Of the 8.5 years from July 1, 1941 to January 1, 1950, only 1949 and to a smaller extent 1948 are likely to have produced substantial population gains. The five years after the end of World War II presumably showed a population deficit on the balance.[5]

The data on school enrollment and some other evidence indicates that the former great superiority of the rural areas in the birth rate does not exist any more. An approximately equal birth rate in urban and rural areas now indicates a decline of about 20 percent since 1926 in urban areas—a development, which must be considered normal for the changes which occurred in the country. The birth rate in rural areas apparently went down to little more than one half, owing to a very great shortage of males in rural areas, especially among the collectivized peasants.[6] This decline in males was and is so great that one may justly speak of disruption of the family life in the countryside. It is a matter of speculation whether the higher birth rate of the rural areas will reappear, after the sex composition in rural areas has become more nearly normal.

On Page 19 of *Statistical Handbook, 1956,* are found the data on the "class composition" of the Soviet population in the beginning of 1956:

Occupational Class	*Millions*
Wage earners	117
Collective farms and cooperated artisans	82
Individual peasants and non-cooperated artisans	1
	200

The "other" population (armed forces, inmates of concentration camps and jails; students, invalids, non-working pensioners, etc.) are merged into the groups mentioned in unknown proportions.

The total number of wage earners at the end of 1955 is given at 47.9 million *(op. cit.,* page 189). In conjunction with 117 million stated as the total population of wage earners, this implies a dependent-employed ratio of 144 to 100. The ratio was substantially smaller, if a larger part of the "other" population included into the 117 million is again excluded and if the wage earners unemployed in December 1955 are added to the number of wage earners.[7] The dependent-employed ratio rises, however, if the wage earners of the State farms and

[5] In a well documented article in *Bulletin of the Institute for the Study of the U.S.S.R.,* November 1956, pp. 30-37, Yu. P. Mironenko estimates the growth of the Soviet population in 1949 at 3 million and in 1946-48 also at three million. The total of 6 million is substantially larger than this writer is inclined to assume for this period. Mironenko's calculations find some support in the fact that the number of persons voting for the Supreme Soviet increased from 101.7 million on February 1946 to 111.1 million on March 1950. Mironenko's calculations result in a population of only 175 million on January 1, 1946. This implies a loss of nearly 25 million in the 4.5 years of the U.S.S.R.'s participation in World War II. Mironenko does not fully account for this loss. His estimates also imply a sudden, very large improvement, since 1946. This improvement is not supported by the evidence on living conditions.

[6] Evidence points to only 25-27 million able-bodied kolkhoz peasants (men 16-59 years of age, females 16-54 years) for a total of about 20 million households in recent years. The stated number of households is given in *Statistical Handbook,* 1956, page 128). The number of able-bodied kolkhozniki must be inferred from other evidence. The most recent evidence of this kind is as follows: The total number of *trudodni* earned by the kolkhoz peasants was 9,005 million in 1953 (*Statistical Handbook,* 1956, page 129); 10-12 percent is taken off for *trudodni* earned by older people and minors. Balance of 8 billion *trudodni* is earned by the able-bodied. The average number of *tudodni* earned by able-bodied kolkhozniki in 1953 is given at 295 by Karnaukhova in *Problems of the Socialized Economy, 1956).* Hence 27.1 million able-bodied kolkhozniki in 1953 is indicated by this evidence. This number must have declined further after more than 2 million tractor drivers were transferred from the status of kolkhoz peasants to that of employees of the MTS.

[7] In September 1955, the number of wage earners amounted to 50.4 million as against 47.9 million at the end of the same year.

machine-tractor stations with their low dependent-occupied ratio is excluded.

In any case both the official estimate of the total wage-earning population and the implied dependent-employed ratio make sense, provided the figure for the wage earners is accepted; nobody seems to have seriously doubted these data thus far.

The number of *non-farm* wage earners increased from 28.9 million in 1940 to 42.5 in 1955 *(op. cit.*, page 190). With their families the increase may have amounted to 30 million. The number of artisans in cooperatives is given in *Statistical Handbook, 1956*, page 44, at 1.6 million for 1955 (without their families); with their families they may have numbered 3.5 millions. The number of artisans in cooperatives is unlikely to have been substantially different in 1940 (no evidence is supplied in *Statistical Handbook*, 1956 in this year).

The self-employed artisans number about 0.5 million in 1955 (implied in *op. cit.*, page 19). Approximately the same number may be assumed for the pre-1939 territory in 1940. But there must have been perhaps 5-7 million artisans and traders (independents and wage earners) including their families in the new territories in 1940.

An increase in gainful non-farm population including the dependents in the present boundaries is in the order of magnitude of 23-25 million for the period from 1940 to 1955.

It was noted that the number of collective peasants including artisans in cooperatives was given at 82 million for 1955. Also noted was the number of artisans in cooperatives and their families, possibly equaling 3.5 million in 1955. Hence the number of peasants in collective farms plus their share in "other" population amounted to 78.5 million. Without the "other" population the number of kolkhoz peasants was equal to at most 76-77 million. In 1940, the number of kolkhozniki amounted to about 82 million—a decline of 5-6 million until 1956. With the number of kolkhozniki established, a comparison of the farm and non-farm population in 1940 and 1955 can be attempted:

Occupational groups	*1940*	*1955*	*Change (1955-1940)*
	(Millions)		
Collective peasants	82	76-77	—5, —6
Individual peasants			
Pre-1939 territory	1.0)	0.5	—.5
New territory	14.0-15.0)		—
Wage earners of State farms and MTS	4	10	+6
Total farm	104-106	86.5-87.5	—17.5, —18.5
Total non-farm	86	113	+27

Hence a decline in the total farm population of about 18 million is indicated.

Thus the gainful non-farm population appears to have increased by 23-25 million; the farm population declined by about 18 million. To be still accounted for are 6-8 million.

The number of inmates in concentration camps presumably went down, let us assume, by 2 million. The number of men in the armed forces also probably declined, in spite of an enlarged expenditure on these forces in real terms (shift to types of armed forces requiring more material (in cost) and fewer men). There is finally still a small unaccounted for balance of the 1940 population in the new territories.[8]

The only offsetting factor is that the number of invalids, pensioners, etc., increased.

Thus the gains and losses in the various occupations roughly offset one another.[9] Occupational statistics are thus in line with the official estimate for the total population in 1956.

The subdivision of the population in urban and rural areas according to official data is:[10]

Year	*Urban*	*Rural*	*Total*
1940	60.6[a]	131.1	191.7
Beginning of 1951	71.4	111.2	182.6
April 1956	87.0	113.2	200.2

Thus a decline of the rural population of 17.9 million from 1940 to April 1956 is indicated by the official data; the decline probably was somewhat larger, if the calculation is made on the basis of population in the U.S.S.R. in July 1941. The official deficit in rural population is about equal to the decline in farm population. The assumed reduction of the number of inmates in concentration camps would also have been at the expense of the rural population.

Statistical Handbook, 1956, page 187 and 188, contains data for the number of persons engaged in the various occupations; they are in the highly "enlightening" form of percentages of unknown totals. Contrary to the previous practice, the numbers for the various categories of engaged persons were recalculated to units but these units are not stated and they are apparently different on each of the two pages. So far as it is possible to decipher these data, they seem to be roughly in line with the data on the "class composition" in *Statistical Handbook, 1956*, page 19. A greater decline of able-bodied collective peasants from 1940 to 1955 than the decline in the total number of such peasants is indicated.

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[8] This population was assumed to have been equal to 22 million at the end of 1940; accounted for thus far were 5-7 million artisans and traders and 14-15 million peasants, a total of 19-22 million.

[9] The number of kolkhozniki may have been actually somewhat smaller in 1955 than it was assumed above.

[a] In *op. cit.*, page 26, this figure is marked as that for the beginning of 1941.

NEWS ABOUT MEMBERS

Leo C. Bailey is now Associate Economist for the Stanford Research Institute at the Mountain States office in Phoenix. His work includes research in industrial marketing, area industrial development, resource economics and related fields for industrial and community clients.

James T. Baird, Jr. has been appointed an Analytical Statistician in the Biostatistical Analysis Branch, Biometrics Division, Office of the Surgeon General, Department of the Air Force. He was formerly a Health Statistician with the Department of State, assigned to Beirut, Lebanon.

Kenneth H. Baker is Vice-President, California-Oregon TV, Inc., operating KBES-TV, KIEM-TV, KOTI-TV. His work involves research and market development.

Byron W. Brown, Jr., formerly Instructor in Biostatistics in the College of Medicine, University of Minnesota, is now Assistant.

E. Earl Bryant is now a Statistician in the Records and Reporting Branch, Biometrics Division, Office of the Surgeon General, Department of the Air Force. He was formerly Registrar and Statistician with the Dallas City Public Health Department.

Arthur F. Burns, who resigned as Chairman of the Council of Economic Advisers on Dec. 1, has been elected President of the National Bureau of Economic Research.

Seymour Bush is a Data Reduction Analyst for RCA at Patrick Air Force Base. Most of his work is estimating the errors for the various optical-electrical tracking equipment.

Lourival Camara, Professor of Sampling Technology at the National School of Statistical Sciences, Rio de Janeiro, Brazil, is now Director of the same school. He is also teaching an intensive course in statistics for students from Latin American countries, named by their governments or by the Inter-American Statistical Institute.

Victor Chew is now Assistant Statistician at the Institute of Statistics, North Carolina State College. He was formerly Assistant Professor of Statistics in the Department of Agronomy, and Assistant Research Professor in the Statistical Laboratory, University of Florida.

Donald R. G. Cowan, Professor of Marketing, School of Business Administration, University of Michigan, Ann Arbor, is on leave and is directing a study of the growth and capital needs of the steel industry for the Brookings Institution, Washington, D. C. His headquarters and working staff are at the University of Michigan.

Charles F. Crichton is now a Systems Analyst with Remington Rand UNIVAC, St. Paul, Minnesota.

Thomas W. Dennison has been appointed Analytical Statistician in the Biostatistical Analysis Branch of the Biometrics Division, Office of the Surgeon General, Department of the Air Force. He was formerly employed in engineering and biological research with the Aero-Radio Corporation and the Ralph M. Parsons Company.

Harvey F. Dingman, formerly a research psychologist with Personnel Research Branch, Department of the Army, is now a research scientist, MUMRRO, George Washington University, and is assigned to Human Research Unit NR 4, Ft. Bliss, Texas. He will serve as an advisor on experimental design and statistical methodology, as well as program for the IBM 650 occasionally.

Herman H. Fasteau has transferred from the Foreign Trade Division to the Office of the Chief, Governments Division, Bureau of the Census.

Bernard Frank is now Chief of the Biostatistical Analysis Branch, Biometrics Division, Office of the Surgeon General, Department of the Air Force. He was formerly an Analytical Statistician in the Resources and Evaluation Division, Department of Medicine and Surgery, Veterans Administration.

Alfred E. Gannatt is now Associate Professor of Statistics at Virginia Polytechnic Institute.

Ezra Glaser, who has been on the staff of the Office of Statistical Standards, Bureau of the Budget since 1945, has resigned from Government service to join National Analysts, Inc., where he will work on the Operations Research Staff, in Washington.

Donald R. Herzog, Manager, Marketing Research, Aro Equipment Corporation, Bryan, Ohio, has been appointed Lecturer in Business, Indiana University Center, Fort Wayne, Indiana.

Marvin Hoffenberg has resigned from the Logistics Department of the RAND Corporation to become Director of Research, de Vegh and Company, Economic Consulting Department, Washington, D. C.

Dorothy K. Howerton has a two-year appointment at the Tulane University School of Social Work as Visiting Associate Professor of Social Research.

Eunice M. Knapp recently transferred from the Public Housing Administration to the Marketing Organization and Cost Branch, Marketing Research Division, Agricultural Marketing Service, Department of Agriculture. Her position is Statistician.

Jacob L. Kovner has been transferred to the Rocky Mountain Forest Experiment Station as Station Statistician with headquarters at Ft. Collins, Colorado, at Colorado A. & M. College.

Thomas J. Kuzelka, formerly with the Feed, Grains and Hay Section of the Agricultural Estimates Division, Agricultural Marketing Service, has been appointed head of the Seed Crops Section.

Sheldon G. Levin, formerly with the Personnel Research Branch, AGO Army, Washington, D. C., is presently employed as Mathematical Statistician with the Field Test Branch, Diamond Ordnance Fuze Laboratories, Army, Washington, D. C.

Forrest E. Linder's new position is Director, National Health Survey Program, U. S. Public Health Service.

Benjamin Lipstein has been elected a Vice President of the Audits and Surveys Co., Inc., New York City, which measures shares of markets of national brands and conducts consumer and industrial surveys.

Fred R. Magenheim has resigned his position as Supervisory Analytical Statistician with the New York Naval Shipyard, Material Laboratory, and is at present employed as an Industrial Engineer with the New York City Sanitation Department.

Jerome A. Mark, formerly Acting Chief, has been appointed Chief of the Branch of Plant Level Studies, Division of Productivity and Technological Developments, Bureau of Labor Statistics.

Paul W. McCracken has been appointed a member of the Council of Economic Advisers.

B. H. McLemore has returned to Jackson State College, Mississippi, as Associate Professor of Mathematics after a three-year leave of absence for study.

Margaret J. Mettert has transferred from the Seattle Army Terminal where she was the supervisory analytical statistician, to the Military Sea Transportation Service, Pacific, in San Francisco. She has received a commendation and a $300 cash award for superior accomplishment in directing the activities of the Progress Analysis Branch at the Terminal, and for the pioneering work done by her in developing a system of statistical review.

Robert Mirsky, formerly with the Cornell Aeronautical Laboratory, has joined the General Electric Company in Philadelphia as a Research Analyst in its Systems Engineering Operation.

Donald F. Morrison has left Lincoln Laboratory, M.I.T., on military leave to report

for active duty with the Commissioned Corps, Public Health Service, as a Mathematical Statistician, National Institute of Mental Health, Bethesda, Maryland.

William G. O'Regan is now Station Statistician, California Forest and Range Experiment Station, University of California, Berkeley.

Jacob Perlman has joined the Office of Special Studies in the National Science Foundation as Study Director for Surveys. He was formerly with the United Nations, serving as expert in technical assistance in Bolivia and the Philippines.

Sydney C. Reagan of Southern Methodist University has been appointed a member of the Task Group of Oilseeds and Animal Fats of the President's Bipartisan Commission on Increased Industrial Use of Agricultural Products.

Richard D. Remington is at present a U. S. Public Health Service Research Fellow in the Department of Public Health Statistics of the School of Public Health of the University of Michigan.

Irving Roshwalb has been elected a Vice President of the Audits and Surveys Co., Inc., New York City.

Alan Ross, Assistant Professor, is now Statistician on a planning group at the new medical center at the University of Kentucky, Lexington.

Naomi D. Rothwell has been appointed to the Inventory Statistics Branch in the Housing Division, Bureau of the Census.

Thomas S. Russell has accepted the position of Station Statistician and Assistant Professor with the State College of Washington.

Ronald W. Shepard is Professor of Industrial Engineering at the University of California, Berkeley.

Harry A. Shoemaker, formerly a Research Scientist at the Human Resources Research Office, George Washington University, is now Assistant Professor of Psychology at the State College of Washington, Pullman.

Peyton Stapp, Assistant Chief of the Office of Statistical Standards, has returned after a year's leave of absence in Manila as Chief of a statistical team under the ICA program to advise the Philippine Government in organizing its statistical program.

Earl A. Thomas is now Chief, Test Procedures and Evaluation Group, Research and Advanced Development Division, Avco Mfg. Corp., Lawrence, Massachusetts.

Joseph Waksberg, formerly a Mathematical Statistician in the Population Division, has transferred to the Housing Division, Bureau of the Census, as Chief of the Statistical Methods Branch.

W. C. Walters, Jr. has changed from Chief, Program Review and Analysis, Benicia Arsenal, Benicia, California, to Personnel Analyst, California State Personnel Board.

Alfred N. Watson has joined the new firm of Campbell, Potts, Alban and Watson, practicing law in Columbus, Ohio.

Irving Weiss has resigned from the Mathematics Department, Lehigh University, to accept a position at the Bell Telephone Laboratories, North Andover, Massachusetts, as a member of the technical staff.

Charles S. Wilder has been appointed Statistician in the Records and Reporting Branch, Biometrics Division, Office of the Surgeon General, Department of the Air Force. He was formerly Research Associate in the Division of Cancer Research, Bureau of Vital Statistics, Connecticut State Department of Health.

Janet L. Wile has been promoted to Director of the Statistical Control Division of the Audits and Surveys Company, Inc., which measures shares of markets of national brands and conducts consumer and industrial surveys.

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CHAPTER NOTES

Albany

The meeting on November 28th was devoted to a panel discussion on "The Story of Highway Planning in New York State." The moderator was Maynard A. Beebe, Director of Highway Planning, N. Y. State Department of Public Works, and the speakers were Edwin F. Clarke, Principal Civil Engineer, Rural Section, and C. Edward Billion, Principal Civil Engineer, Vehicle Operation Research, of the N. Y. State Department of Public Works.

A joint dinner meeting with the American Society for Quality Control was held on January 10th. The speaker was Robert F. Korns, M. D., Assistant Commissioner for Program Development and Evaluation, N. Y. State Department of Health. Dr. Korns' topic was "Epidemiological Methods in the Study of Adult Heart Disease." The dinner was preceded by a problem session dealing with a quality control problem in the production of a new vaccine.

Boston

The Boston Chapter met December 6th to hear a panel discussion on the Training of Statisticians led by Professor Elmer B. Mode of the Mathematics Department of Boston University. Other members of the panel were Mr. E. L. Quirin, Director of Research at Babson's Reports, Inc.; Mr. Edward T. O'Donnell, Regional Employment and Manpower Analyst for the Boston Regional Office, the Bureau of Labor Statistics; Dr. Henry D. Locke, Vice-President of Liberty Mutual Insurance Company; Mr. Harold Glazer, Senior Engineer in the Mathematical Analysis Section of Sylvania Electric Products, Inc.; and Professor Frederick Mosteller of the Department of Social Relations at Harvard University.

Members of the panel discussed the statistical techniques which should be a part of the training of a statistician and pointed out the tremendous increase in recent years in this body of knowledge, particularly in mathematical statistics. There was also discussion of additional knowledge needed by the statistician. The point was made that training should never stop.

Buffalo-Niagara

The October meeting was devoted to a timely and interesting topic—Statistical Aspects of Election Prediction. Dr. Zenon Szatrowski, Chairman of the Department of Statistics, University of Buffalo, now on leave with the IBM Corporation, explained some of the statistical formulae used in predicting total election results on the basis of early voting returns when IBM electronic computers are utilized, and discussed problems such as the variance estimate to be used. Dr. Robert Stern, of the Department of History and Government, University of Buffalo, reviewed some problems of pre-election public opinion polls in predicting election results. The difficulty in determining electoral college votes on the basis of individual voter preferences; the problems of how to predict the undecided vote, how to determine whether or not the sampled respondent intends to vote and how the sampling error can upset predictions, as in 1948, were among the topics discussed.

The November meeting was held jointly with the American Marketing Association. Dr. Stanley Seeman of Seeman Associates, Buffalo, presented the difficulties in trying to determine consumers' preferences for six different packages in a short, economical survey. The use of a 10-point rating scale for indicating package appeal was decided upon. Mr. Sigmund Zobel, Department of Statistics, University of Buffalo, explained the statistician's problem of trying to design a way of sampling consumers' ratings for the different packages without having each respondent rate each package. The most economical and time-saving design was one tentatively entitled by Mr. Zobel a balanced incomplete block design. It involved obtaining only three package ratings from each respondent but yielded the maximum information desired by the sponsor.

Central Indiana

The chapter's November meeting was held at the Indiana University Medical Center, Indianapolis. The speaker was Mr. Irving Miller, Chief of the Statistics Office, Indiana Division of Mental Health. The talk was entitled, "Statistical Analysis in a Study of Secular Fund-Raising for Community Agencies." Mr. Miller discussed some problems encountered in a study to evaluate the efficiency of a community fund-raising campaign. The measure settled upon may be derived from the regression of the per capita collections in cities of similar size on the log of population size, the per capita E-bond sales, an index of wealth, and the percent of nonwhite residents. The study indicates that various fund drives have not been in competition, but that all seem to do well or poorly together. Mr. Miller also discussed the observed Yule distribution of philanthropic gift sizes.

The Chapter's December meeting was held at Butler University. The speaker was Professor Jack Watson of the Indiana University School of Music. His topic was "New Directions in Quantitative Research in Music." Dr. Watson discussed applications of statistical methods in the following fields: 1) analysis of the content of educational materials; 2) measurement of the consistency of musical taste; 3) use of sampling techniques in the field of musical criticism; 4) quantification of measures of style of composition; 5) quantification of measures of performance. Dr. Watson expressed no hope for the joining of the measures of taste to the measures of style in order to mechanically produce the "perfect" composition. However, the possibility of the measurement of musical taste becoming a means of describing other aspects of a society, via correlation techniques, was mentioned.

The Chapter's January meeting was held at Indiana University's Medical Center. The speaker was Dr. Helen Bozivich of the Purdue University Statistical Laboratory. Her topic was "Preliminary Tests of Significance and Pooling Procedures for Certain Models." The discussion centered around the size and power of the final test when "Sometimes Pool" and "Never Pool" procedures are based on a preliminary test of a null hypothesis. Miss Bozivich presented charts depicting both size and power under varying assumptions concerning the parameters of the model.

Central New Jersey

The Educational Testing Service's survey of high school students and their college plans was the subject of the meeting held at Princeton on December 3rd. The speakers were John W. French, William G. Mollenkopf, and Glen Stice, Research Associates at the Educational Testing Service. The study they described is supported by the National Science Foundation and involves a survey of a national sample of 35,000 high school students. The survey includes a scholastic aptitude test and a series of questions about college plans, background factors and reaction to hypothetical scholarship offers.

A joint meeting with the local chapter of the Society for Industrial and Applied Mathematics was held at Princeton on January 14th. Mr. Leo J. Tick of the Research Division, New York University College of Engineering, spoke on "Some Applications of Random Processes in the Ocean Wave and Short Motion Analysis."

His talk was concerned with the applications of stationary random processes on ocean wave analysis; this model has given the first realistic picture of the sea surface. A random model of the sea surface leads to random mechanics of ship motions.

Chicago

At the dinner meeting held November 26th John Lehman, Clerk of the Joint Economic Committee and Economist for the Subcommittee on Economic Statistics, U. S. Congress, spoke on "Needed Improvements in Economic Statistics." He discussed suggestions and recommendations developed from hearings held by the Joint Economic Committee, and plans for further improvement in basic economic indicators.

The December 10th dinner meeting heard W. Edward Deming, statistical consultant and Professor of Statistics at New York University, discuss "Standards of Sampling." Dr. Deming described the power and the limitations of statistical theory when applied to designing samples which must meet extreme specifications of precision. There was also some discussion of the problems involved in developing sample data to be used as legal evidence.

The subject of the luncheon meeting held November 15th was "Inadmissible Samples and Confidence Limits." The speaker was Howard L. Jones of the Illinois Bell Telephone Company. At the luncheon meeting of December 4th John H. Johnson, President of Johnson Publishing Company, which publishes such leading Negro periodicals as *Ebony* and *Jet*, discussed "The Negro Market." Dr. Edmund W. J. Faison, Research Supervisor of Leo Burnett & Company, spoke on "Effects of Color in Packaging" at the December 20th luncheon. On January 8th Dr. Dorothy S. Brady, formerly Chief of the Division of Prices and Cost of Living of the Bureau of Labor Statistics, discussed "Applications of Family Expenditure Survey Data." She dealt with the uses of the Consumer Expenditures Study prepared by the University of Pennsylvania in cooperation with the Bureau of Labor Statistics.

Denver

The Chapter's first workshop meeting was held on November 29th. Dr. Burton W. Jones, Chairman of the Department of Mathematics at the University of Colorado, spoke on "Applications of Matrices in Statistics." Dr. Jones gave a presentation of simple matrix algebra and certain statistical applications of matrices.

A dinner meeting was held on December 27th at which Dr. H. J. Dodge, Professor and Acting Head, Department of Preventive Medicine and Public Health, School of Medicine, University of Colorado, discussed "Statistics in Medicine." This was the second talk in the Chapter's series, "Statistics in the Professions."

Detroit

A meeting was held on December 3rd to discuss plans and to set up committees for the 1956-57 season. It was decided to hold six regular meetings between January and June, five of which were to be dinner meetings with talks on subjects of current interest to statisticians. Three committees were established—Arrangements, Program, and Printed Program. The chairmen of these committees are Gene Steineger, Sam Brown and David Wightman.

New officers of the Chapter are:

President—Robert I. Chien, Wyandotte Chemical Corporation

Vice-President—Samuel L. Brown, Chrysler Corporation

Secretary-Treasurer—David G. Wightman, Michigan Bell Telephone Company

Hawaii

A dinner meeting was held on December 16th at which the speaker was Dr. Walter R. Steiger, Assistant Professor of Physics at the University of Hawaii. Dr. Steiger's subject was "Statistical Data Collection in Hawaii in Connection with the International Geophysical Year." The dinner was preceded by a business meeting.

Milwaukee

At the October meeting Mr. Frank A. Wherry, Director of the Bureau of Business and Economic Research, addressed the Chapter on "The Role of Statistical Techniques in Business and Economic Research."

The annual meeting of the Milwaukee Chapter was held on December 11th, 1956. The following officers were elected and inducted for the calendar year 1957:

President—Dr. Joseph V. Talacko, Department of Mathematics, Marquette University

Vice-President—Dr. Stephen Spiegelglas, Department of Economics, University of Wisconsin (Milwaukee)

Secretary-Treasurer—Mr. J. Raymond Helbert, Chemist-Statistician, Red Star Yeast and Products Company

Recording Secretary—Mr. James B. Schultz, Management Statistician, Milway, Inc.

The speaker of the evening was Dr. S. Spiegelglas whose subject was "Input-Output Analysis."

Montreal

The November meeting was held jointly with the Montreal Economics Association. The topic for the evening was "Economic Indicators for Short-Term Forecasting" and the guest speakers were Messrs. D. J. Daly and W. A. Beckett of the Economics Branch, Department of Trade and Commerce, Ottawa. Recent studies on business-cycle indicators in Canada were reported, and the talk was followed by a lengthy discussion period.

At the meeting on December 13th, Dr. F. K. Hare, Chairman of the Department of Geography, McGill University, spoke on "The Use of Statistics in Meteorology." He outlined the difficulties involved in weather forecasting and the recent developments in mathematical forecasting techniques. Dr. Hare then went into the details of some of the work being done at McGill and elsewhere on the use of regression and correlation analysis in a statistical approach to forecasting.

North Carolina

The North Carolina Chapter of the American Statistical Association held a fall meeting at Raleigh, November 8th. The program consisted of a lecture by Dr. W. H. Horton on "Experiences with Factorials and Fractional Factorial Experiments."

At a short business meeting Dr. R. J. Monroe was elected to fill the unexpired term of Secretary-Treasurer which is being vacated by J. A. Rigney. Mr. Rigney is going to Peru on December 1st on a two-year assignment to participate in a foreign aid program which is being administered by North Carolina State College.

North Texas

At the September 28th meeting Paul R. Erdwinn, Operations Research Group, Chance-Vought Aircraft, spoke on "Application of Multiple Correlation to Budget Control." The subject of the October 19th meeting was "U. S. Presidential Election Prediction Methods with the Remington Rand UNIVAC." The speaker was Carl Powers, Regional Instructor for UNIVAC #1 and #2, Remington Rand Corporation. Dr. Ed Pratt, Southwestern Medical School, University of Texas, spoke at the November 16th meeting on "Statistics in the Medical Profession—Needs for and Shortcomings."

(Continued on back cover)

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CHAPTER NOTES — CONTINUED FROM PAGE 25

The following officers have been elected:
President—Dr. W. A. Wortham (re-elected)
Vice-President—W. R. Haymes
Secretary—Paul D. Minton, Mathematics Department, Southern Methodist University

Southern California

A dinner meeting was held on December 6th at which Dr. John G. Caffrey, Acting Director of the Los Angeles office of the Educational Testing Service, spoke on "Statistics and Test Theory." He discussed the nature and use of psychological and educational tests, the processing and analysis of test data, applicable statistical treatments and concepts, and the future of Psychometry. Dr. Caffrey was presented the annual "Best Speaker" award for his talk last year on "How to Win at Roulette."

The Southern California Chapter of the ASA was one of the organizations sponsoring the 1957 Business Outlook Conference, which was held at the Biltmore Hotel in Los Angeles on January 9th. The Conference lasted a full day, with sessions on the outlook for the United States in general and for Southern California industries in particular.

Washington, D. C.

The subject of the panel meeting on November 19th was "Behind the Soviet Statistical Curtain: A Report by Three Recent Visitors." The chairman was Raymond W. Goldsmith, and the speakers were Warren Eason, Princeton University, G. Warren Nutter, University of Virginia, and Hans Heymann, Jr., RAND Corporation. Lazar Volin, Department of Agriculture; Harold Wool, Department of Defense; and Leon Herman, Department of Commerce, were discussants. Mr. Eason summarized talks with top Soviet statisticians on population and labor force statistics, including the recent official population estimate of 200,200,000. This figure, which is considerably below the estimates of U. S. statisticians, may be revised upwards on the basis of the next census, which will probably be taken within the next two or three years. There has been no census since 1939, and registration of births and deaths is incomplete. Mr. Nutter spoke on Soviet industry statistics, pointing out problems created by differences in product classification and terminology. The industries he visited gave an impression of considerable economic backwardness. Mr. Heymann, who had been a member of a housing delegation sponsored by the National Association of Home Builders, said that the average amount of housing space in urban areas was 4 sq. meters per capita. The sanitary norm is 9 sq. meters, and 5.7 sq. meters may be reached by 1960. He noted a widespread desire on the part of urban apartment dwellers to build their own homes. This desire was discouraged by the Government, which was pushing a program of State-constructed and State-owned apartment houses. While substantial numbers of these apartments were being constructed, their quality was poor by U. S. standards.

The December 10th meeting was devoted to "Statistics in Medicine and Public Health." The chairman was Dr. Hendrik Luykx, Office of the Surgeon General, U. S. Air Force. The speakers were Samuel Greenhouse, National Institutes of Health, who discussed "Statistical Evaluation of the Effects of Tranquillizing Drugs"; Dr. L. Jerome Krovetz, Bureau of State Services, Public Health Service, who spoke on "Field Studies of Poliomyelitis Vaccine"; Albert P. Iskrant, Bureau of State Services, whose topic was "Effect of Abnormal Carbohydrates in Metabolism in Pregnancy"; and Sidney J. Cutler, National Institutes of Health, who discussed "Probabilities of Long-Term Survival in Cancer Patients."